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Bug-proof walls have USG abuzz

Product may give a needed boost

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 Date 12 DEC 88

By Liz Sly

USG Corp. has developed a new kind of bug-proof wall designed to improve security for governments and corporations and also help ease the company's debt burden.

The new product, called Instar, is lighter and easier to install than any of the so-called shielded rooms currently on the market, USG says.

Instar went on the market in November, and the company has won two orders so far, one from a private engineering firm and one, crucially, from the State Department.

USG is optimistic that these will be the first orders of many as demand continues to grow for protection from eavesdroppers, primarily for computer systems.

It is also touting the product as proof that leverage need not necessarily sound the death knell for research and development. The investment bankers who put up the \$2.4 billion USG needed to repel hostile raiders earlier this year were the first to be shown the new product when it went on the market last month.

USG, the world's largest manufacturer of wallboard, underwent a costly recapitalization last July to fend off a hostile takeover bid from Texas-based Desert Partners.

But it continued work on Instar throughout the fight, in spite of cost-cutting at the corporate research department, said Don Roller, chief operating officer of USG Interiors Inc., the USG subsidiary that is making Instar.

The company says it aims to capture up to 20 percent of an

expanding \$300 million-a-year market in the next three years, generating extra sales of some \$30 million a year, Roller said.

That will not have much impact on USG's huge debt load, which now stands at \$2.7 billion, he conceded.

But because USG offers a complete range of room requirements, such as ceilings, floors and walls to hide the steel panels, Instar is expected to generate extra sales of those products, too, he said.

Roller also predicted that the market for shielded rooms could grow to as much as \$1 billion a year. "As we're becoming more of an electronics country, the opportunities will be greater and greater," he said.

Bug-proof walls are neither new nor particularly complicated. Steel does the basic job of protecting voices, electronic signals or radio frequencies from leaving or entering a room.

But existing shielded room systems are heavy and unwieldy, said Brad Oberg, Instar's program manager. They typically consist of panels of steel that have to be welded or bolted together to prevent waves escaping through cracks. This makes them so heavy that they can only be installed in a basement or on the first floor.

Oberg claims USG has overcome these problems with a special interlocking seam that is as effective as welding in keeping out rays but which enables much thinner, lighter steel panels to be used.

A room built with Instar would be 75 to 80 percent lighter than one using existing technology, said Oberg. The steel used in the

wall is 0.024 inches thick as opposed to a half-inch thick for most other designs.

Because the pieces can be snapped together simply and disassembled as needed, an Instar-shielded room can be installed anywhere in a building and taken down to be reinstalled elsewhere if necessary.

Instar costs around \$26 a square foot, making it cheaper than a welded steel room, which

costs around \$50 a square foot. An average 16-by-20-foot room would cost around \$150,000 to install, complete with ordinary wall, ceiling and floor fixtures to make it look like a regular room, Oberg said.

Richard McBride of the International Operations Subcommittee of the House Foreign Affairs Committee, which oversees allocations for embassy security, has seen the new design.

"It's very innovative," he said. "It allows larger areas to be secured and it's also something where the configuration can be changed, allowing greater flexibility."

USG developed Instar after approaching the State Department in October, 1987, with another product, a wall designed to keep out people, said Oberg.

The State Department wasn't interested, but said, there was an urgent need for improvements in the shielded-room market.

So USG's research department set to work, adapting the interlocking seams the company uses in ceiling tiles for use with steel panels. Instar was ready to go on the market 14 months later, and the whole project cost just \$600,000, a relatively small amount for the development of a new product, according to Roller.

Demand for shielded rooms is growing fast as governments and corporations alike increasingly rely on computers, which can be overheard using sophisticated eavesdropping devices, Roller said.

"Every time you use a computer keyboard an electric field is generated. Anyone listening in can pick it up and know what you're typing in," he said.

The company initially is focusing the thrust of its marketing efforts on the State Department, where there is a clearly identifiable demand and because it provides "one hell of a marketing tool" when it comes to selling elsewhere, said Roller.

USG's first order, signed Nov. 22,

was for a teleconference room in Washington costing around \$100,000.

The company is also hoping to cash in on a slice of the \$3 billion Congress allocated in 1986 for improving security at embassies, much of which remains to be spent, said Stephen Miller of Stephen Miller & Associates, a marketing agency that is acting as USG's liaison in Washington.

The Inman Commission appointed to explore the problem of embassy security after the bombings in Lebanon targeted 79 embassies worldwide for security improvements, including the addition of shielded rooms. So far, only about three of the shielded-room contracts have been bid, Miller said.

A prize contract for which USG intends to lobby hard would be the next U.S. embassy building in Moscow. The fiasco surrounding the new Moscow embassy, which the State Department said must be torn down and rebuilt because it was found to be riddled with bugs, helped spur interest in the need for shielded

rooms, he said.

"You have to protect against your own emanations, and also make sure the emanations of anything that's been planted would never leave the room," he explained.

A State Department official refused to comment specifically on USG's product or its potential use, citing security considerations. "Physically lighter designs are always more desirable, and we're always interested in improved products. We're always looking to improve security, and that includes using shielded rooms," said the official.

Defense companies working on government contracts also are expected to provide an important market. They are required by the government to provide shielded rooms to protect their research and designs from computer eavesdroppers, said David Shore, technical director of the Armed Forces Communications and Electronics Association.

Private corporations also increasingly are using anti-eavesdropping protections against industrial sabotage, said Brian Bragunier, marketing manager for P.S.C. Inc., a systems engineering consulting firm.

Major companies like Ford Motor Co. and General Motors Corp. have shielded rooms to protect their new design models, while financial institutions such as the Chicago Board of Trade and the New York Stock Exchange use shielded rooms to protect computer transactions from outside interference. Construction companies and architects are including shielded rooms in their designs in anticipation of their likely use, Bragunier said.